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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,792	12/12/2003	Erwin Hacker	514413-3869.1	3467

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/734,792	HACKER ET AL.	
	Examiner	Art Unit	
	SABIHA QAZI	1628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/7/10*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3,6-9 and 12-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3,6-9 and 12-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/7/10*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Non Final Office Action

Claims 3, 6-9, 12-22 are pending. No claim is allowed.

Amendments are entered.

Summary of this Office Action

1. 35 USC § 112 (1)---Written Description Rejection
2. 35 USC § 112 (2)---Scope of Enablement Rejection
3. 35 USC § 103 (a)---Rejections
4. Response to Remarks
5. Communication

Claim Rejections - 35 USC § 112—Written Description Rejection

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3, 6-9, 12-21 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Following reasons apply. Following reasons apply:

The "derivatives' in claims can include any known or unknown compounds. This has not been explained in the specification.

The term "radical" is not defined what is actually covered and not specifically disclosed.

The term "other active compounds" is not described what is included in other active compounds.

The specification does not fully describe the terms what is coved by these terms.

It appears that Applicant has no possession of the claimed invention at the time the invention was filed.

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to one skilled in the art that the inventor had the possession at the time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claimed language.

See In re Kaslow, 707 F 2d 1366, 1375 (Fed. Cir. 1983).

The description requirement of the patent statute requires a description of an invention,

not an indication of a result that one might achieve if one made that invention. See for example, In re Wilder, 22 USPQ 369, 372-3 (Fed. Cir. 1984). (Holding that a claim was not adequately described because the specification did 'little more than outline goals appellants hope the claimed invention achieves and the problems the invention will hopefully ameliorate.')

Mere indistinct terms (such as "derivatives" (claims 3, 19"radical" "other active substance" (claim 6) however, may not suffice to meet the written description requirement. This is particularly true when a compound is claimed in purely functional terms. See Univ. of Rochester v. G.D. Searle, 69 USPQ2d 1886 (CAFC 2004) at 1892, stating: The appearance of mere indistinct words in a specification or a claim, even an original claim, does not necessarily satisfy that requirement. A description of an anti-inflammatory steroid, i.e., a steroid (a generic structural term) described even in terms of its functioning of lessening inflammation of tissues fails to distinguish any steroid from others having the same activity or function. A description of what a material does, rather than of what it is, usually does not suffice.... The disclosure must allow one skilled in the art to visualize or recognize the identity of the subject matter purportedly described. (Emphasis added). In present case it is synergistic combination.
Disclosure of any combination of such identifying characteristics that distinguish the claimed invention from other materials and would lead one of skill in the art to the conclusion that the applicant was in possession of the claimed species is sufficient.

Furthemore, synergism cannot be predicted for the large number of the combination of compounds A and B. In case of the compounds of formula II, III, IV and V as in claim 19 include thousands of compounds including for example heterocyclyl radical or heterocyclylamino radical having in each case 3-6 ring atoms and 1 to 3 hetero ring atoms selected from N, O, or R2 and R3 together with nitrogen atm of the NR2R3 are a hetrocyclic radical having 3 to 6 ring atoms and 1 to 4 hetero ring atoms where the further hetero ring atoms which are optionally present in addition to nitrogen atom are selected from N, O, and S (definition of R2 and R3) which are combined with componenet (B) which also **includes hundreds of compounds** as listed in claims such as in claims 19, 14, 15.

Conversely, a description of a chemical genus will usually comprise a recitation of structural features common to the members of the genus, which features constitute a substantial portion of the genus. See Univ. of Calf. V. Eli Lilly, 43 USPQ 2d 1398, 1406 (Fed. Cir. 1997). This is analogous to enablement of a genus under Section 112, ¶ 1, by showing the enablement of a representative number of species within the genus.

A chemical genus can be adequately described if the disclosure presents a sufficient number of representative species that encompass the genus. *If the genus has substantial variance, the disclosure must describe a sufficient number of species to reflect the variation within that genus*. See MPEP 2163. The MPEP lists factors that can be used to determine if sufficient evidence of possession has been furnished in the disclosure of the Application. These include the level of skill and knowledge in the art, partial structure, physical and/or chemical properties, functional characteristics alone or coupled with a known or disclosed correlation between structure and function, and the method of making the claimed invention. Disclosure of any *combination of such identifying characteristics that distinguish the claimed invention from other materials* and would lead one of skill in the art to the conclusion that the applicant was in possession of the claimed species is sufficient. MPEP 2163.

Here, the specification does not provide a reasonably representative disclosure, a potentially huge genus inclusive of many different compounds having widely divergent structures and functions. Specifically, the specification discloses only a limited number of species, and these are not viewed as being reasonably representative of the genus in its claimed scope because no readily apparent combination of identifying characteristics is provided, other than the disclosure of those specific species as examples of the claimed genus.

The specification does not provide a reasonably representative disclosure for synergism as claimed.

Applicant is kindly requested to explain the issue. In the present case Applicant has no possession for the claimed subject matter. Further the compounds as in claim 19 covers large number of compounds. At the time invention was filed applicant has no possession of the invention as claimed.

The written description requirement prevents applications from using the amendment process to update the disclosure in their disclosures (claims or specification) during the pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating an accurate accounting of the priority of the invention. See 35 USC 132. The function of description requirement is to ensure that the inventor had possession, as of filing date of the application relied on, the specific subject matter claimed by him.

See *Genetech,* 108 F 3d 1361, 1365 (Fed. Cir. at 1366, 78, 1999).

Possession may be shown in a variety of ways including description of an actual reduction to practice, or by showing that the invention was "ready for patenting" such as by the disclosure of drawings or structural chemical formulas that show that the invention was complete, or by describing distinguishing identifying characteristics sufficient to show that the applicant was in possession of the claimed invention. See, e.g., *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 68, 119 S.Ct. 304, 312, 48 USPQ2d 1641, 1647 (1998); *Eli Lilly*, 119 F.3d at 1568, 43 USPQ2d at 1406; *Amgen, Inc. v. Chugai Pharmaceutical*, 927 F.2d 1200, 1206, 18 USPQ2d 1016, 1021 (Fed. Cir. 1991) (one must define a compound by "whatever characteristics sufficiently distinguish it"). See MPEP 2163.06. Details are cites in scope of enablement rejection.

Applicant is kindly requested to explain.

Claim Rejections - 35 USC § 112 Scope of Enablement

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:The following is a quotation of the first paragraph of 35 U.S.C. 112:

> *The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly*

connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 3, 6 and 12-22 rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for synergistic combination of some compounds presented in examples 1-22 does not reasonably provide enablement for the broad genus as claimed. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Following reasons apply:

Scope of Enablement

To be enabling, the specification of the patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation. In re Wright, 999 F.2d 1557, 1561 (Fed. Cir. 1993). Explaining what is meant by "undue experimentation," the Federal Circuit has stated:

> The test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed to enable the determination of how to practice a desired embodiment of the claimed invention. PPG v. Guardian, 75 F.3d 1558, 1564 (Fed. Cir. 1996).[1]

The factors that may be considered in determining whether a disclosure would require undue experimentation are set forth by In re Wands, 8 USPQ2d 1400 (CAFC 1988) at 1404 where the court set forth the eight factors to consider when assessing if a disclosure would have

[1] As pointed out by the court in In re Angstadt, 537 F.2d 498 at 504 (CCPA 1976), the key word is "undue", not "experimentation".

required undue experimentation. Citing Ex parte Forman, 230 USPQ 546 (BdApls 1986) at 547 the court recited eight factors:

1) the quantity of experimentation necessary,

2) the amount of direction or guidance provided,

3) the presence or absence of working examples,

4) the nature of the invention,

5) the state of the prior art,

6) the relative skill of those in the art,

7) the predictability of the art, and

8) the breadth of the claims.

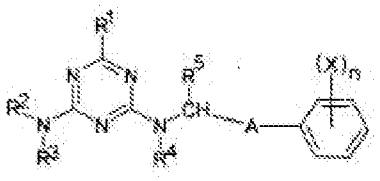
These factors are always applied against the background understanding that scope of enablement varies inversely with the degree of unpredictability involved. In re Fisher, 57 CCPA 1099, 1108, 427 F.2d 833, 839, 166 USPQ 18, 24 (1970). Keeping that in mind, the Wands factors are relevant to the instant fact situation for the following reasons:

1. The nature of the invention, state and predictability of the art, and relative Skill level

The instant invention is drawn to a selective herbicidal composition comprising

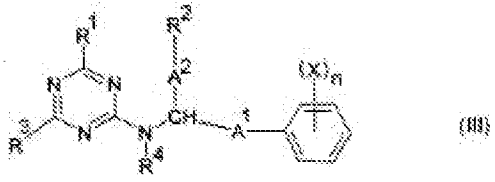
19. (Previously presented) A herbicide combination comprising a synergistically effective amount of components (A) and (B), wherein component (A) comprises a compound of the formula (II), (III), (IV) and (V), where the compounds are

-compounds of the formula (II) and their salts



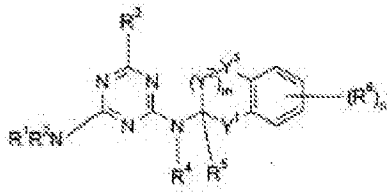
(II)

- compounds of the formula (III) or their salts



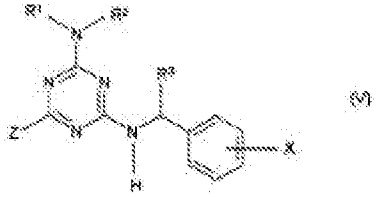
(III)

- compounds of the formula (IV) or their salts



(IV)

- substituted 2,4-diamino-1,3,5-triazines of the formula (V),



(V)

Component B of claim 19 which will be in combination of compounds A as in claim 19.

(B) is one or more herbicides selected from the group of compounds consisting of

(B1) foliar- and/or soil-acting herbicides which are active against monocotyledonous harmful plants selected from the group consisting of

(B1.1.1) isoproturon,

(B1.1.2) chlorotoluron,

(B1.2.1) flufenacet,

(B1.2.2) pendimethalin,

(B1.2.3) prosulfocarb,

(B1.3.1) clodinafop-propargyl,

(B1.3.2) diclofop-methyl,

(B1.3.3) fenoxaprop-P-ethyl and fenoxaprop-ethyl,

(B1.3.4) quizalofop-P and its salts and esters and quizalofop and its salts and esters,

(B1.3.5) fluazifop-P and its esters and fluazifop and its esters,

(B1.3.6) haloxyfop and haloxyfop-P and their esters,

(B1.3.7) propaquizafop (PM, p. 1021-1022),

(B1.3.8) cyhalofop and its esters,

(B1.4.1) sethoxydim,

(B1.4.2) cycloxydim

(B1.4.3) clethodim,
(B1.4.4) clefoxidim,
(B1.4.5) tralkoxidim,
(B1.5.1) dimethenamid,
(B1.5.2) penthoxamid,
(B1.5.3) butachlor,
(B1.5.4) pretilachlor,
(B1.6.1) imazamethabenz-methyl
(B1.6.2) simazin
(B1.6.3) molinate
(B1.6.4) thiobencarb
(B1.6.4) MY 100,
(B1.6.5) anilofos,
(B1.6.6) cafenstrole,
(B1.6.7) mefenacet,
(B1.6.8) fentrazamid,
(B1.6.9) thiazopyr,
(B1.6.10) oxadiazon,
(B1.6.11) esprocarb,
(B1.6.12) pyributicarb,
(B1.6.13) azimsulfuron,
(B1.6.14) AEB391 and related azoles,
(B1.6.15) thenylchlor,
(B1.6.16) pentoxazone,
(B1.6.17) pyriminobac and pyriminobac-methyl,
(B1.6.18) flucarbazone and its salts and
(B1.6.19) procarbazone and its salts,

Due to very long lists of B compounds listed in B2, B3 and B4 are not listed in the action and can be seen in claim 19, pages 28-24.

(1) The predictability or unpredictability of the art:

Claimed invention is unpredictable because the compounds of formula (I) and (b) as in claim 1 contain compounds having variety of different structures, which surely are expected to react differently. In example 21 on page 85 compounds A1 (elected) and B1.3.3 (elected) combined with safener isoxadifen-ethyl were used on only two species, the concentrations of the A1 and B are not disclosed. The data does not show to apply on any other species in any amount to get the synergistic results. The prediction of synergism for the combinations of any other concentration or species is not possible. For such a large number of compounds (b) having different properties and compound of formula (I) is therefore impossible. See the definitions of various substituents which are very broad, to use the invention as claimed.

Last para on page 9 and lines 1-6 on page 10:

> R^2 and R^3 in each case independently of one another are hydrogen, amino or alkylamino or dialkylamino having in each case 1 to 6 carbon atoms in the alkyl radical, an acyclic or cyclic hydrocarbon radical or hydrocarbonoxy radical having in each case 1 to 10 carbon atoms or a heterocyclyl radical, heterocyclyloxy radical or heterocyclylamino radical having in each case 3 to 6 ring atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S,
>
> where each of the five last-mentioned radicals is unsubstituted or substituted, or an acyl radical
> or
> R^2 and R^3 together with the nitrogen atom of the group NR^2R^3 are a heterocyclic radical having 3 to 6 ring atoms and 1 to 4 hetero ring atoms, where the further hetero ring atoms which are optionally present in addition to the nitrogen atom are selected from the group consisting of N, O and S and the radical is unsubstituted or substituted,

The data presented in the specification examples 1-22 (pages 68 to 86) has been considered. Only example 22 presents combination close to elected species which additionally contains isoxadifen-ethyl. The data does not commensurate with the scope of the claimed subject matter because it is tested on two species and probably at certain concentration. There is no guidance

how the data can be extrapolated to other concentrations and other species to get the synergistic results. Furthemore, synergism cannot be predicted for the large number of compounds.

(2) The breadth of the claims: The claims are broad; the compounds of formula I itself includes thousands of compounds and their combination with the multitude of different classes of herbicides which can be selected

In case of the compounds of formula II, III, IV and V as in claim 19 include thousands of compounds including for example heterocyclyl radical or heterocyclylamino radical having in each case 3-6 ring atoms and 1 to 3 hetero ring atoms selected from N, O, or R2 and R3 together with nitrogen atm of the NR2R3 are a hetrocyclic radical having 3 to 6 ring atoms and 1 to 4 hetero ring atoms where the further hetero ring atoms which are optionally present in addition to nitrogen atom are selected from N, O, and S (definition of R2 and R3) which are combined with componenet (B) which also **includes hundreds of compounds** as listed in claims such as in claims 19, 14, 15.

Claims are broad containing heterocyclic compounds containing N, O and S includes thousands of compounds. These classes of compounds are so structurally different from each other; it is impossible to predict any SYNERGISTIC activity for the combination of such compounds.

The amount of direction or guidance provided and the presence or absence of working examples

There is no data or guidance that the results shown in example 21 which contains elected species would be extended or extrapolated to any species and any concentrations other than presented in example 21. The specification discloses the preparation of the some compounds and contains few examples on the application limited number of species and very specific amounts applied. The synergism requires specific amounts and with the species and condition. The specification provides no direction or guidance for practicing the claimed invention in its "full scope". The state of the art clearly shows that prediction of the treatment or using the compounds of claim1 is not possible one skilled in the art would have to go through undue experimentation to use the claimed invention.

The quantity of experimentation necessary

In order to practice the invention commensurate in scope with the instant claims, one skilled in the art would have to go through undue experimentation to determine the process of making the invention and figuring out what compounds should be prepared due to complexity of the substituents of the claimed compounds with no assurance of success.

Accordingly, the instant claims do not comply with the enablement requirement of §112, to practice the claimed invention in its "full scope" a person of ordinary skill in the art would have to engage in undue experimentation, with no assurance of success.

Claim Rejections - 35 USC § 103—1st

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

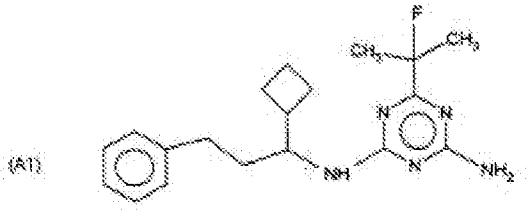
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Applicant claims

Elected species is the combination of claim 18.

(A1) 

(A1) 4-amino-6-(1-fluoro-1-methylethyl)-2-(3-phenyl-1-cyclobutylamino)-1,3,5-triazine; and the one or more herbicides (B) is fenoxaprop-P-ethyl.

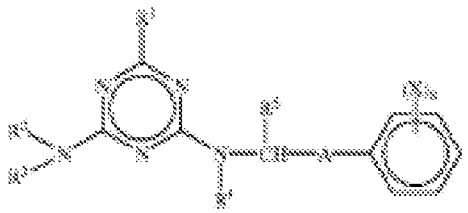
Claims 21-23 rejected under 35 U.S.C. 103 (a) as being unpatentable over Giencke et al. (US Patent 6,239,071) in view of the Applicant's own disclosure,

Determining the scope and contents of the prior art (MPEP § 2141.01)

Giencke et al teaches triazines compounds of formula (I) which is (A) is present claims and the combination of other active compounds (B) in present claims which embraces Applicants claimed invention. See the entire document especially compounds of formula (I) in column 1 and table I in columns 22-38 where the claimed triazines compounds are taught. The combination compounds are also taught and listed in columns 18-20.

The reference teaches triazines compounds containing cycloalkyl group at R5. The combination of the compounds of A and B are taught by the prior art.

See the definition of R5 which can be (C3-C6) cycloalkyl, (C1-C4) alkyl and (C1-C4)alkyl, (lines 52-53, and column 8).



The reference teaches that the mono- and dicotyledonous weed flora can be controlled by the compounds according to the invention without a restriction to certain species taking place as a result of naming them. On the side of monocotyledonous weed species, for example, Avena, Lolium, Alopecurus, Phalaris, Echinochloa, Digitaria, Setaria and also Cyperus species from the annual group and on the side of the perennial species Agropyron, Cynodon, Imperata as well as Sorghum and also perennial Cyperus species are well controlled. In the case of dicotyledonous weed species, the spectrum of action extends to species such as, for example, Galium, Viola, Veronica, Lamium, Stellaria, Amaranthus, Sinapis, Ipomoea, Matricaria, Abutilon and Sida on the annual side and Convolvulus, Cirsium, Rumex and Artemisia in the case of the perennial weeds, lines 22-37 in column 15).

Weeds occurring in rice under the specific cultivation conditions, such as, for example, Sagittaria, Alisma, Eleocharis, Scirpus and Cyperus are likewise excellently controlled by the active compounds according to the invention. If the compounds according to the invention are applied to the surface of the earth before germination, either the emergence of the weed seedlings is completely prevented or the weeds grow to the seed leaf stage, but then cease their growth and then finally die off completely after three to four weeks have passed, (lines 38-48 in column 15).

The reference teaches that when the active compounds are applied to the green parts of plants post-emergence, a drastic stop in growth likewise occurs very rapidly after the treatment and the weed plants stay in the growth stage present at the time of application or die off completely after a certain time, so that in this way weed competition harmful for the crop plants is eliminated very early and in a lasting manner, (lines 49-54 in column 15).

The reference teaches that the compounds have an excellent herbicidal activity against mono- and dicotyledonous weeds, crop plants of economically important crops such as, for example, wheat, barley, rye, rice, corn, sugar beet, cotton and soybeans are only damaged insignificantly or not at all. For these reasons, the present compounds are very highly suitable for the selective control of undesired vegetation in agricultural crop plantations, lines 56-63, and column 15).

The reference teaches that "the substances according to the invention have outstanding growth-regulatory properties in crop plants. They intervene in a regulating manner in the plants' own metabolism and can thus be employed for affecting plant constituents in a controlled manner and for facilitating harvesting, such as, for example, by causing desiccation and stunting of growth. In addition, they are also suitable for the general control and inhibition of undesired vegetative growth without at the same time destroying the plants. In many monocotyledonous and dicotyledonous crops, inhibition of vegetative growth plays a large part, as lodging can be decreased or completely prevented by this means" (lines 64-67 in column 15, and lines 1-14 in column 16).

On the basis of these formulations, combinations with other pesticidally active substances, such as, for example, insecticides, acaricides, herbicides and fungicides, and also with safeners, fertilizers and/or growth regulators, can also be prepared, e.g. in the form of a finished formulation or as a tank mix, lines 53-58, column 16).

The reference further teaches that "combination components which can be employed for the active compounds according to the invention in mixture formulations or in the tank mix are, for example, known active compounds, such as are described in, for example, Weed Research 26, 441-445 (1986), or "The Pesticide Manual", 10th edition, The British Crop Protection Council and the Royal Soc. of Chemistry, 1994 and references cited there. Herbicides known from the literature, which can be combined with the compounds of the formula (I), which can be mentioned are, for example, the following active compounds (note: the compounds are either designated by the "common name" according to the International Organization for Standardization (ISO) or by the chemical names, if appropriate together with a customary code number): acetochlor; acifluorfen; aclonifen; AKH 7088, i.e. [[[1-[5-[2-chloro-4-(trifluoromethyl)-phenoxy]-2-

nitrophenyl]-2-methoxyeth ylidene]amino]oxy]acetic acid and methyl ester; alachlor; alloxydim; ametryn; amidosulfuron; amitrole; AMS, i.e. ammonium sulfamate; anilofos; asulam; atrazine; azimsulfurone (DPX-A8947); aziprotryne; barban; BAS 516 H, i.e. 5-fluoro-2-phenyl-4H-3,1-benzoxazin-4-one; benazolin; benfluralin; benfuresate; bensulfuron-methyl; bensulide; bentazone; benzofenap; benzofluor; benzoylprop-ethyl; benzthiazuron; bialaphos; bifenox; bromacil; bromobutide; bromofenoxim; bromoxynil; bromuron; buminafos; busoxinone; butachlor; butamifos; butenachlor; buthidazole; butralin; butylate; cafenstrole (CH-900); carbetamide; cafentrazone (ICI-A0051); CDAA, i.e. 2-chloro-N,N-di-2-propenylacetamide; CDEC, i.e. 2-chloroallyl diethyldithiocarbamate, chlomethoxyfen; chloramben; chlorazifop-butyl, chlormesulon (ICI-A0051); chlorbromuron; chlorbufam; chlorfenac; chlorflurecol-methyl; chloridazon; chlorimuron-ethyl; chlornitrofen; chlorotoluron; chloroxuron; chlorpropham; chlorsulfuron; chlorthal-dimethyl; chlorthiamid; cinmethylin; cinosulfuron; clethodim; clodinafop and its ester derivatives (e.g. clodinafop-propargyl); clomazone; clomeprop; cloproxydim; clopyralid; cumyluron (JC 940); cyanazine; cycloate; cyclosulfamuron (AC 104); cycloxydim; cycluron; cyhalofop and its ester derivatives (e.g. butyl ester, DEH-112); cyperquat; cyprazine; cyprazole; daimuron; 2,4-DB; dalapon; desmedipham; desmetryn; di-allate; dicamba; dichlobenil; dichlorprop; diclofop and its esters such as diclofop-methyl; diethatyl; difenoxuron; difenzoquat; diflufenican; dimefuron; dimethachlor; dimethametryn; dimethenamid (SAN-582H); dimethazone, clomazone; dimethipin; dimetrasulfuron, dinitramine; dinoseb; dinoterb; diphenamid; dipropetryn; diquat; dithiopyr; diuron; DNOC; eglinazine-ethyl; EL 77, i.e. 5-cyano-1-(1,1-dimethylethyl)-N-methyl-1H-pyrazole-4-carboxamide; endothal; EPTC; esprocarb; ethalfluralin; ethametsulfuron-methyl; ethidimuron; ethiozin; ethofumesate; F5231, i.e. N-[2-chloro-4-fluoro-5-[4-(3-fluoropropyl)-4,5-dihydro-5-oxo-1H-tetrazol-1 -yl]phenyl]ethanesulfonamide; ethoxyfen and its esters (e.g. ethyl ester, HN-252); etobenzanid (HW 52); fenoprop; fenoxan, fenoxaprop and fenoxaprop-P and also their esters e.g. **fenoxaprop-P-ethyl and fenoxaprop-ethyl;** fenoxydim; fenuron; flamprop-methyl; flazasulfuron; fluazifop and fluazifop-P and their esters, e.g. fluazifop-butyl and fluazifop-P-butyl; fluchloralin; flumetsulam; flumeturon; flumiclorac and its esters (e.g. pentyl ester, S-23031); flumioxazin

(S482); flumipropyn; flupoxam (KNW-739); fluorodifen; fluoroglycofen-ethyl; flupropacil (UBIC-4243); fluridone; fluorochloridone; fluroxypyr; flurtamone; fomesafen; fosamine; furyloxyfen; glufosinate; glyphosate; halosafen; halosulfuron and its esters (e.g. methyl ester, NC-319); haloxyfop and its esters, haloxyfop-P (.dbd.R-haloxyfop) and its esters; hexazinone; imazamethabenz-methyl; imazapyr; imazaquin and salts such as the ammonium salt; imazethamethapyr; imazethapyr; imazosulfuron; ioxynil; isocarbamid; isopropalin; isoproturon; isouron; isoxaben; isoxapyrifop; karbutilate; lactofen; lenacil; linuron; MCPA; MCPB; mecoprop; mefenacet; mefluidide; metamitron; metazachlor; methabenzthiazuron; metham; methazole; methoxyphenone; methyldymron; metabenzuron, methobenzuron; metobromuron; metolachlor; metosulam (XRD 511); metoxuron; metribuzin; metsulfuron-methyl; MH; molinate; monalide; monocarbamide dihydrogensulfate; monolinuron; monuron; MT 128, i.e. 6-chloro-N-(3-chloro-2-propenyl)-5-methyl-N-phenyl-3-pyridazinamine; MT 5950, i.e. N-[3-chloro-4-(1-methylethyl)phenyl]-2-methylpentanamide; naproanilide; napropamide; naptalam; NC 310, i.e. 4-(2,4-dichlorobenzoyl)-1-methyl-5-benzyloxypyrazole; neburon; nicosulfuron; nipyraclophen; nitralin; nitrofen; nitrofluorfen; norflurazon; orbencarb; oryzalin; oxadiargyl (RP-020630); oxadiazon; oxyfluorfen; paraquat; pebulate; pendimethalin; perfluidone; phenisopham; phenmedipham; picloram; piperophos; piributicarb; pirifenop-butyl; pretilachlor; primisulfuron-methyl; procyazine; prodiamine; profluralin; proglinazine-ethyl; prometon; prometryn; propachlor; propanil; propaquizafop and its esters; propazine; propham; propisochlor; propyzamide; prosulfalin; prosulfocarb; prosulfuron (CGA-152005); prynachlor; pyrazolinate; pyrazon; pyrazosulfuron-ethyl; pyrazoxyfen; pyridate; pyrithiobac (KIH-2031); pyroxofop and its esters (e.g. propargyl ester); quinclorac; quinmerac; quinofop and its ester derivatives, quizalofop und quizalofop-P and their ester derivatives e.g. quizalofop-ethyl; quizalofop-P-tefuryl und -ethyl; renriduron; rimsulfuron (DPX-E 9636); S 275, i.e. 2-[4-chloro-2-fluoro-5-(2-propynyloxy)phenyl]4,5,6,7-tetrahydro-2H-indazol e; secbumeton; sethoxydim; siduron; simazine; simetryn; SN 106279, i.e. 2-[[7-[2-chlor-4-(trifluoro-methyl)phenoxy]-2-naphthalenyl]oxy]propanoic acid and methyl esters; sulfentrazon (FMC-97285, F-6285); sulfazuron; sulfometuron-methyl; sulfosate (ICI-A0224); TCA; tebutam (GCP-5544); tebuthiuron;

terbacil; terbucarb; terbuchlor; terbumeton; terbuthylazine; terbutryn; TFH 450, i.e. N,N-diethyl-3-[(2-ethyl-6-methylphenyl)sulfonyl]-1H-1,2,4-triazole-1-carbo xamide; thenylchlor (NSK-850); thiazafluron; thizopyr (Mon-13200); thidiazimin (SN-24085); thifensulfuron-methyl; thiobencarb; tiocarbazil; tralkoxydim; tri-allate; triasulfuron; triazofenamide; tribenuron-methyl; triclopyr; tridiphane; trietazine; trifluralin; triflusulfuron and esters (e.g. methyl ester, DPX-66037); trimeturon; tsitodef; vernolate; and others. (See Columns 18-20).

Ascertaining the differences between the prior art and the claims at issue.

The reference does not teach specifically the weight ratio of A and B as in claim 12.

Compounds A (A1) as elected species is generically taught by the prior art when R5 can be cyclobutyl. The compound containing cyclopropyl group is in 2-8, in table 2. See the compounds in tables 1 and 2 in columns 22-31.

Compound B as elected species fenoxaprop-P-ethyl and fenoxaprop-ethyl (line 10 in column 19) is taught by the reference and highlighted above.

R5 is taught by the reference as cycloalkyl (C3-C6), (C1-C4) alkyl or halo alkyl which covers the cyclobutyl and cyclopropyl, which covers lower alkyl and halo alkyl. The reference specifically does not specifically disclose the specific compound A1.

The reference also teaches other compounds which are listed in present invention as B, some cited above).

Applicant's specification discloses that all the compounds are known (see page 27 of the specification).

No synergism has been noted for the claimed compounds.

Prima facie Obviousness and motivation (MPEP § 2142 to 2143)

It would have been obvious to one skilled in the art at the time the invention was filed to prepare the combination of herbicidal composition containing triazines compounds of formula (I) and compounds B. One would have been motivated to do so because combining the composition of known compounds for the same purpose would have been obvious to one who is familiar with the herbicidal art. It would be expected to obtain the compositions comprising compounds A and B which has superior herbicidal effects. It is *prima facie* obvious to combine two compositions each of which is taught by the

prior art to be useful for the same purpose in order to form a third composition that is to be used for the very same purpose; the idea of combining them flows logically from their having been individually taught in the prior art. In re Kerkhoven, 205 USPQ 1069.

It has been decided by courts that "when a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious". KSR v. Teleflex, 127 **S,Ct. 1727**, 1740 (2007)(quoting Sakraida v. A.G. Pro, 425 U.S. 273, 282 (1976)). The court also decided that "when the question is whether a patent claiming the combination of elements of prior art is obvious", the relevant question is "whether the improvement is more than the predictable use of prior art elements according to their established functions." (Id.). Addressing the issue of obviousness, the Supreme Court noted that the analysis under 35 USC 103 "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." KSR v. Teleflex, 127 S.Ct. 1727, 1741 (2007). The Court emphasized that "[a] person of ordinary skill is… a person of ordinary creativity, not an automaton." Id. at 1742.

Examiner believes that in view of the prior art, and Applicants own disclosure and for the reasons cited above, claims and specification does not provide any new concept or invention and would have prima facie obvious to one skilled in the art at the time the invention was filed. The synergistic data presented in the specification does not commensurate with the scope of the claims. NO synergism can be predicted as claimed.

In the light of the forgoing discussion, the Examiner's ultimate legal conclusion is that the subject matter defined by the instant claims would have been prima facie obvious to one skilled in the art in view of the prior art of record.

Claim Rejections - 35 USC § 103—2nd

Claims 3, 6, 9, 12-22 rejected under 35 U.S.C. 103(a) as being unpatentable over GIENCKE et al. (US Patent 6,239,071), combined with HOECHST (PCT 98/34925), HIRATA

et al. (A: EP 0 467 204; B: 0 469 406; D: C: 0 47 221; EP 0 471 284), TAKEMATSU (abstract of JPO Publication 04095003), IDEMITSU (A: Abstract of JP 7267804); B: and Applicant's disclosure (page 27).

Applicants have the disclosure on the record that the aminotriazinyl herbicides herein are known and that they have been described in the prior art (specification, p. 27).

Giencke et al. (US Patent 6239071) Giencke et al teaches that aminotriazine herbicides may be combined with a large number of secondary herbicides (columns 18-20), details of the reference is cited above.

Hoechst teaches also that aminotriazine herbicides may be combined with various other herbicides (p. 36-38). Hirata et al (A) teach the synergistic combination of aminotriazine herbicides with urea herbicides. Hirata et al (B) teach the synergistic combination of aminotriazine herbicides with benzoic acid or pyridine carboxylic acid herbicides.

Hirata et al (C) teach the synergistic combination of aminotriazine herbicides with thiocarbamate herbicides (formula II). Hirata et al (D) teach the synergistic combination of aminotriazine herbicides with sulfonylurea herbicides.

Takematsu teaches the combination of aminotriazine herbicides with dinitroaniline herbicides for selective weed control.

Idemitsu (A) teaches the synergistic combination of aminotriazine herbicides with prodiamine, dithiopyr, halosulfuron, triclopyr, napropamid, bensulide, propyzamide, flazasulfuron, imazosulfuron, and imazaquin.

Idemitsu (B) teaches the synergistic combination of aminotriazine herbicides with pyrazosulfuron-ethyl, MCPP, pendimethalin, besulodine, and simazine.

One skilled in the art would be motivated to combine any of HIRATA et al. (A: EP 0 467 204; B: 0 469 406; D: C: 0 47 221; EP 0 471 284), TAKEMATSU IDEMITSU (A: Abstract of JP 7267804); B: and Applicant's disclosure (page 27) with GIENCKE et al. (US Patent 6,239,071), because they teach the herbicidal activity of aminotriazine herbicides with a second herbicidal agent both of them are taught by US '071 and by other references including Applicant's own

disclosure. Thus it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have combined applicants' aminotriazine herbicides with a second herbicidal agent both of which are taught by US '071 and other references and present specification to make a herbicidal composition because a wide variety of such combinations. It would have been obvious to one skilled in the art at the time the invention was filed to prepare the combination of herbicidal composition containing triazines compounds of formula (I) and compounds B. One would have been motivated to do so because combining the composition of known compounds for the same purpose would have been obvious to one who is familiar with the herbicidal art.

It would be expected to obtain the compositions comprising compounds A and B which has superior herbicidal effects. Further, it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose in order to form a third composition that is to be used for the very same purpose; the idea of combining them flows logically from their having been individually taught in the prior art. In re Kerkhoven, 205 USPQ 1069. Determination of appropriate concentration ranges would have been within the skill level of the ordinary artisan.
As has been decided by the court, a combination, for the same purpose, of one additive explicitly disclosed in the prior art and another suggested by the prior art is at least prima facie obvious. In re Susi, 169 USPQ 423. There is nothing inventive in a composition of old ingredients of known properties with each ingredient functioning individually as expected. In re Sussaman 58 USPQ 262.

Furthermore, because of each compound appears to be well known in the prior art, it would appear that the combination of the compounds would have been obvious in view of MPEP 2144.06 and see Ex parte Quadranti, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992).

No synergism was noted for elected group as claimed.

In the light of the forgoing discussion, the Examiner's ultimate legal conclusion is that the subject matter defined by the instant claims would have obvious to one skilled in the art.

Data in the Specification

The data presented in the specification example 21 which closely represent elected combination except that the examples contain one more component. The data presented in examples 1-22 (pages 68 to 86) do not commensurate with the scope of claims. The combination was tested on two species and not specific amounts used in combination are disclosed. Even if it were disclosed it will not be applicable to other comcentrations and other species for synergistic activity,

See Ex parte Quadranti for synergistic combinations. Furthemore, synergism cannot be predicted for all the combination as claimed. In the present case sulfonnyl urea compounds of formula I include large number of compounds which are combined with (B) which also includes hundreds of compounds as listed in claims such as in claims 19, 14, 15. Therefore, results presented in the specification are not considered synergistic and do not represent the combination of whole genus as claimed. The combination of known herbicides would have been obvious to one skilled in the art. Specification discloses that all the coompounds are known.

As has been established that a single species is seldom, if ever, sufficient to support a generic claim. In re Shokal, 242 F.2d 771, 113 U.S.P.Q. 283, 285 (C.C.P.A. 1957). See also, In re Grimme, 274 F.2d 949, 124 U.S.P.Q. 499, 501 (C.C.P.A. 1960) (the naming of a member of a genus or subgenus is not a proper basis for claiming the whole group).

Objective evidence of nonobviousness must be commensurate in scope with the scope of the claims. In re Tiffin, 171 USPQ 294. A showing limited to a single species can hardly be considered probative of the invention's nonobviousness in view of the breadth of the claims.

Because each of the herbicides are well-known in the prior art, it would appear that the combination as claimed would have been obvious in veiw of MPEP 2144.06 and particularly in view of *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992) where it was held that "the use of combinations of herbicides is so notoriously well known as to be capable of being taken together by the official notice."

See In *re Kollman*, 595 F.2d 48, 201 USPQ 193 (CCPA 1979)

Examiner believes that since each compound appears to be well known in the prior art, it would appear that the combination of the compounds would have been obvious in view of MPEP 2144.06 and see Ex parte Quadranti, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992). See MPEP 2144. In Ex parte Quadranti where it was held that use of materials in combination, each of which is known to function for intended purpose, is generally held to be prima facie obvious, and in instant case, use of combination of herbicides is so notoriously well known as to be capable of being taken by official notice; generalizations such as Colby formula are not particularly useful in determining whether synergism has been demonstrated, since formula inherently results in expectation of less than additive effect for combination of herbicides, since there is no evidence that such approach is considered valid by significant number of ordinarily skilled workers in relevant area of technology, and since it could be reasonably argued that in most cases, additive or better than additive results could be expected for combination of herbicides.

Examiner believes that in view of the prior art, and Applicants own disclosure and for the reasons cited above, claims and specification does not provide any new concept or invention and would have prima facie obvious to one skilled in the art at the time the invention was filed. The synergistic data presented in the specification does not commensurate with the scope of the claims.

In the light of the forgoing discussion, the Examiner's ultimate legal conclusion is that the subject matter defined by the instant claims would have been obvious within the meaning of 35 U.S.C. 103(a).

Data in Specification

The data presented in the specification examples 1-22 (pages 68 to 86) from which one example 21 is closed to elected species. Examples 9-22 contain compound A1 with different B compounds. The data does not commensurate with the scope of the claimed subject matter. Furthemore, synergism cannot be predicted for the large number of compounds applicable synergistically on every species. In case of the compounds of formula II, III, IV and V as in claim 19 include thousands of compounds including for example heterocyclyl radical or

heterocyclylamino radical having in each case 3-6 ring atoms and 1 to 3 hetero ring atoms selected from N, O, or R2 and R3 together with nitrogen atm of the NR2R3 are a hetrocyclic radical having 3 to 6 ring atoms and 1 to 4 hetero ring atoms where the further hetero ring atoms which are optionally present in addition to nitrogen atom are selected from N, O, and S (definition of R2 and R3) which are combined with componenet (B) which also includes THOUSANDS of compounds as listed in claims such as in claims 19, 14, 15.

Response to Remarks

Applicants response filed on 9/7/10 is hereby acknowledged. The applicants elect the compound claims (Group I - claims 3, 6 and 12-22), and elected species is the combination of (A1) 4-amino-6-(1-fluoro-l-methylethyl)-2-(3-phenyl-1- cyclobutylamino)- 1,3,5-triazine and (B 1.3.3) - fenoxaprop-P-ethyl (see currently pending claim 18) without traverse. The restriction was made on the Applicant's request in Appeal brief.

The compound A1 was generically disclosed in prior art, specific compound was not disclosed. In order to expedite the prosecution the search was extended to other R5, C3-C6 cycloalkyl and C1-C4 alkyl compounds with similar substituents on triazines, A and phenyl ring as in elected species. Elect B is taught by the references as cited above. The search was not extended to the Markush groups as in claims. New reference submitted on 9/7/10 discloses the triazines compounds which are generically claimed in present claims. However, no rejection is being made on this reference because A has not been examined for Markush groups.
Claims 3, 6 and 12-22 encompass the elected species.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sabiha Qazi whose telephone number is (571) 272-0622. The examiner can normally be reached on any business day except Wednesday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fetterolf Brandon can be reached on (571) 272-2919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Sabiha Qazi/
Primary Examiner, Art Unit 1628